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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/624,513 | 07/23/2003 | Hidetoshi Kayama | 240598US90 | 7423 |
| 22850 7590 04/20/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | EXAMINER HAILE, FEBEN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2616 | |

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|--|-------------------|---------------|
| SHORTENED STATUTORY PERIOD OF RESPONSE | NOTIFICATION DATE | DELIVERY MODE |
| 3 MONTHS | 04/20/2007 | ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/20/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/624,513

Applicant(s)

KAYAMA ET AL.

Examiner

Feben M. Haile

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9 and 10 is/are rejected.
- 7) ☒ Claim(s) 6-8 and 11-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 1A and 1B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (**page 2 lines 15-22**), hereinafter referred to as Admitted Prior Art, in view of Tsunehara et al. (IS 6,907,260), hereinafter referred to as Tsunehara.

Regarding claims 1 and 3-4, Admitted Prior Art discloses the first control method controlling the transmission power so as to keep the received power of the

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packet signals constant (**page 2 lines 15-18; a first control method for controlling the transmission power of signals in each transmitter so as to keep the received power of the signals in the receiver constant**), the second control method controlling the transmission power so as to keep a relationship between the received power of the packet signals and the interference power in the radio channels constant (**page 2 lines 19-22; a second control method for controlling the transmission power, so as to keep an SIR of the signals transmitted via each radio channel constant**).

Admitted Prior Art fails to explicitly suggest measuring the traffic volume of the packet signals in the base station; and switching between a first control method and a second control method based on the measured traffic volume in the base station; where the power in the upstream radio channels are kept constant.

Tsunehara teaches an a base station for measuring a signal to interference power ratio of a signal sent from a mobile station in the upstream direction to transmit a transmit power controlling signal (**figure 29 and column 1 lines 51-54**) including upstream channel SIR measuring portion measuring SIR of the received signal input (**figure 29 unit 221 and column 2 lines 9-14**) and an upstream channel transmit power controlling signal generating portion comparing the SIR of the received signal with a target SIR to generate transmit power controlling signals (**figure 29 unit 222 and column 2 lines 15-19**), including a comparator to generate a signal to of either a 0 or 1 depending on whether the SIR of the received signal is larger or smaller then the target SIR (**figure 31 unit 223 and column 2 lines 34-38**) and a selector for choosing either

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the 0 or 1 to instruct the mobile station on how to control power (**figure 31 unit 224 and column 2 lines 38-42**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling transmit power taught by Tsunehara into the transmitter configured to control transmission power disclosed by Admitted Prior Art. The motivation for such a modification is to improve communication quality, thereby increasing communication capacity.

Regarding claims 2 and 9, Admitted Prior Art discloses controlling the transmission power so as to keep the received power of the packet signals and the interference power constant. Tsunehara teaches an upstream channel transmit power controlling signal generating portion comparing the SIR of the received signal with a target SIR to generate transmit power controlling signals (**figure 29 unit 222 and column 2 lines 15-19**), including a comparator to generate a signal to of either a 0 or 1 depending on whether the SIR of the received signal is larger or smaller then the target SIR (**figure 31 unit 223 and column 2 lines 34-38**) and a selector for choosing either the 0 or 1 to instruct the mobile station on how to control power (**figure 31 unit 224 and column 2 lines 38-42**).

3. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (**page 2 lines 15-22**), hereinafter referred to as Admitted Prior Art, in view of Tsunehara et al. (IS 6,907,260), hereinafter referred to as Tsunehara, in view of Komatsu (US 2001/0023188), hereinafter referred to as Komatsu.

Regarding claim 5, Admitted Prior Art as modified by Tsunehara disclose the limitation of the base claim.

Tsunehara further discloses the measurer measures an average interference power in the upstream radio channels as the traffic volume of the packet signals (**figure 29 unit 221 and column 2 lines 9-14; upstream channel SIR measuring portion measuring SIR of the received signal input**), and the switcher switches between the first control method and the second control method, based on the average interference power and a predetermined threshold (**figure 29 unit 222 and column 2 lines 15-19; an upstream channel transmit power controlling signal generating portion comparing the SIR of the received signal with a target SIR to generate transmit power controlling signals; figure 31 unit 223 and column 2 lines 34-38; a comparator to generate a signal to of either a 0 or 1 depending on whether the SIR of the received signal is larger or smaller then the target SIR; figure 31 unit 224 and column 2 lines 38-42; a selector for choosing either the 0 or 1 to instruct the mobile station on how to control power**).

Admitted Prior Art, Tsunehara, and/or their combination fail to explicitly suggest measuring interference power per time unit.

Komatsu teaches a power control method where a base station measures the reception level in a unit of a time slot and compares the reception level with a reference value for issuing an instruction to a mobile station to vary its transmission level.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate power control method taught by Komatsu into the

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transmitter configured to control transmission power disclosed by Admitted Prior Art as modified by the method of controlling transmit power suggested by Tsunehara. The motivation for such a modification is to improve the communication quality in the reverse-link to a base station.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 10 rejected under 35 U.S.C. 102(e) as being anticipated by Tsunehara et al. (IS 6,907,260), hereinafter referred to as Tsunehara.

Regarding claim 10, Tsunehara discloses a notification signal received power measurer configured to measure the received power of a notification signal transmitted from the base station (**figure 32 unit 40 and column 3 lines 15-25; a transmit power controlling signal determining portion determines whether the received transmit power controlling signal is a 0 or 1**); an extractor configured to extract the traffic volume of packet signals transmitted via upstream radio channels and a control method of the transmission power of the packet signals selected in the base station, from the notification signal (**figure 32 unit 41 and column 3 lines 26-29; a selector outputs a**

variation amount of the transmit power in accordance with a controlling signal input from the transmit power controlling signal determining portion); and a transmission judger configured to judge whether or not to transmit the packet signals, based on the received power of the notification signal, the traffic volume of the packet signals and the control method of the transmission power of the packet signals (figure 32 unit 19 and column 3 lines 30-37; a transmit power calculation portion determines the changed transmit power, using the variation amount of the transmit power input from the selector and the current transmit power input from a transmit power maintaining circuit).

Allowable Subject Matter

5. Claims 6-8 and 11-13 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

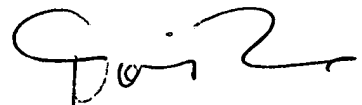
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Feben M. Haile whose telephone number is (571) 272-3072. The examiner can normally be reached on 6:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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04/14/2007



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PRIMARY PATENT EXAMINER
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